

What is claimed is:

1. A resolver comprising a rotor, a stator, an excitation winding and an output winding, characterized in that an output terminal is provided at a middle point between opposite end terminals of the output winding.

2. A resolver comprising a rotor, a stator, an excitation winding and an output winding, the excitation winding and the output winding being wound around the identical pole of the stator, characterized in that an output terminal is provided at a middle point between opposite end terminals of the output winding.

3. A resolver fault detection circuit to be used for a resolver comprising a rotor, a stator, an excitation winding and an output winding, characterized in that the circuit comprises:

an output terminal provided at a middle point between opposite end terminals of the output winding;

a difference voltage detection circuit for obtaining a difference voltage between a first output voltage, between one of the opposite end terminals of the output winding of the resolver and the middle point, and a second output voltage, between the other one of the opposite end terminals of the output winding and the middle point; and

a comparator circuit for outputting a signal as a fault signal when an output voltage from the difference voltage detection circuit deviates from a reference value.

4. A resolver fault detection method to be used for a resolver comprising a rotor, a stator, an excitation winding and an output winding, characterized in that the method comprises the step of obtaining a fault detection signal from a resolver fault detection circuit to detect that the resolver is faulty, wherein the resolver fault detection circuit comprises:

an output terminal provided at a middle point between opposite

end terminals of the output winding;

a difference voltage detection circuit for obtaining a difference voltage between a first output voltage, between one of the opposite end terminals of the output winding of the resolver and the middle point, and a second output voltage, between the other one of the opposite end terminals of the output winding and the middle point; and

a comparator circuit for outputting a signal as a fault signal when an output voltage from the difference voltage detection circuit deviates from a reference value.

5. A resolver fault detection method, characterized in that the method comprises the steps of:

obtaining a first signal of a resolver fault detection circuit, the first signal indicating a fault of a first output winding for outputting an X direction component of a rotor;

obtaining a second signal of the resolver fault detection circuit, the second signal indicating a fault of a second output winding for outputting a Y direction component of the rotor; and

obtaining a logical sum of the first signal and the second signal as a fault detection signal.